APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/881,771	06/18/2001	Yatin R. Acharya	95-505	8241

			EXAMINER
20736	7590	02/09/2005	NGUYEN, SON XUAN

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2000 M STREET NW SUITE 700
WASHINGTON, DC 20036-3307

ART UNIT	PAPER NUMBER
2664	

DATE MAILED: 02/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 June 2001*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 June 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date *9/20/2001*.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____ .

DETAILED ACTION

Double Patenting

1.   The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).
        A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).
        Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2.   Claims 1-11 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-11 of U.S. Patent No. U.S 6,459,698. Although the conflicting claims are not identical, they are not patentably distinct from each other because:

        Regarding to claims 1, 4, 6, 7, 8 the difference is: US patent teaches IP packet and Instant application discloses Ethernet packet. They are 2 different protocols being mapped into InfiniBand packet.

IP data packet has an IP header including a type of service (TOS) field having a differentiated services code point value indicative of layer 3 priority data of the IP packet. These are unique to IP protocol. An Ethernet data packet has a VLAN tag

indicative of layer 2 priority data of the Ethernet packet. Differentiated services code point value and VLAN tag are different in terms of name, but they both do the same function of indicating quality service of data packet. Hence the inventive concept in the current application is an obvious variation of '698 and not patentably distinct.

So it is obvious that the ideas and invention are the same for mapping technique from one form of protocol, either IP packet or Ethernet packet, to another form of protocol, InfiniBand packet.

The comparison of the claims is shown below for more details:

Instant Application	US Patent
1. A router configured for sending and receiving data packets on an InfiniBand network, the router being configured to receive an <u>Ethernet</u> data packet having <u>a VLAN tag</u> indicative of layer <u>2</u> priority data of the <u>Ethernet</u> packet, the router comprising: a mapping table having multiple entries, each entry specifying a <u>VLAN tag</u> and a corresponding service level, and a controller configured for parsing the <u>VLAN tag</u> and determining the service level for the <u>VLAN tag</u>, the controller outputting the <u>Ethernet</u> packet on the InfiniBand network within an InfiniBand packet according to the determined service level.	1. A router configured for sending and receiving data packets on an infiniBand network, the router being configured to receive an <u>Internet Protocol (IP)</u> data packet having an IP header including <u>a type of service (TOS) field having a differentiated services code point value</u> indicative of layer <u>3</u> priority data of the <u>IP</u> packet, the router comprising: a mapping table having multiple entries, each entry specifying a <u>differentiated services code point value</u> and a corresponding service level, and a controller configured for parsing the <u>TOS field</u> and determining the service level for the <u>differentiated services code point value</u>, the controller outputting the <u>IP</u> packet on the InfiniBand network within an InfiniBand packet according to the determined service level.

4. A method of outputting an <u>Ethernet</u> packet, received by a router, onto an InfiniBand network, the method comprising: receiving, by the router, an <u>Ethernet</u> data packet having <u>VLAN tag</u>; parsing the <u>VLAN tag</u> and mapping the <u>VLAN tag</u> to a determined service level based on the parsed <u>VLAN tag</u>; and outputting the <u>Ethernet</u> packet on the InfiniBand network within an InfiniBand packet according to the determined service level.

4. A method of outputting an <u>IP</u> packet, received by a router, onto an InfiniBand network, the method comprising: receiving, by the router, an <u>Internet Protocol (IP)</u> data packet having <u>an IP header including a type of service (TOS) field specifying a differentiated services code point value</u>; parsing the <u>TOS field</u> and mapping the <u>differentiated services code point value</u> to a determined service level based on the parsed <u>TOS field</u>; and outputting the <u>IP</u> packet on the InfiniBand network within an InfiniBand packet according to the determined service level.

5. The method of claim 4, further including, prior to outputting step, the step of mapping the service level to a virtual lane and establishing an infiniBand packet header including a virtual lane field that contains priority data relating to the priority data of the Ethernet packet.

6. The method of claim 4, wherein, prior to the parsing step, the method includes populating within the router a VLAN tag to service level mapping table with VLAN tag and corresponding service level numbers.

5. The method of claim 4, further including, prior to outputting step, the step of mapping the service level to a virtual lane and establishing an InfiniBand packet header including a virtual lane field that contains priority data relating to the priority data of the IP packet.

6. The method of claim 4, wherein, prior to the parsing step, the method includes populating within the router a differential services code point to service level mapping table with differential service code point values and corresponding service level numbers.

7. A router configured for sending and receiving data packets on an InfiniBand network, the router being configured to receive an <u>Ethernet</u> data packet having a <u>VLAN tag</u> indicative of <u>layer 2</u> priority data of the <u>Ethernet</u> packet, the router comprising: means for a mapping a <u>VLAN tag</u> to a corresponding service level, and means for parsing the <u>VLAN tag</u> and determining the service level for the <u>VLAN tag</u>, and for outputting the <u>Ethernet</u> packet on the InfiniBand network within an InfiniBand packet according to the determined service level.

7. A router configured for sending and receiving data packets on an InfiniBand network, the router being configured to receive an <u>Internet Protocol (IP)</u> data packet having an <u>IP header including a type of service (TOS) field having a differentiated services code point value</u> indicative of <u>layer 3</u> priority data of the <u>IP</u> packet, the router comprising: means for a mapping a <u>differentiated services code point value</u> to a corresponding service level, and means for parsing the <u>TOS field</u> and determining the service level for the <u>differentiated services code point value</u>, and for outputting the <u>IP</u> packet on the InfiniBand network within an InfiniBand packet according to the determined service level.

8. The router of claim 7, wherein the means for mapping is a mapping table having multiple entries, each entry specifying a VLAN tag and a corresponding service level.	8. The router of claim 7, wherein the means for mapping is a mapping table having multiple entries, each entry specifying a differentiated services code point value and a corresponding service level.

Conclusion

3.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) Kashyap; Vivek (U.S 6,438,128) Alternate use of data packet fields to convey information.

b) Gasbarro at el. (US 20020141424) Host-fabric adapter having work queue entry (WQE) ring hardware assist (HWA) mechanism.

c) Pettey at el. (U.S 6,594,712) Inifiniband channel adapter for performing direct DMA between PCI bus and inifiniband link.

d) Pekkala at el. (US 20020172195 A1) Apparatus and method for disparate fabric data and transaction buffering within infiniband device.

e) Wang, Yunsen (US 20020184368 A1)Network system, method and protocols for

hierarchical service and content distribution via directory enabled network.

f) Pettey, Christopher J. (US 20030014544 A1) Infiniband TM work queue to TCP/IP

translation.

g) Hiekali; Nasser (U.S 5,619,500) ATM network interface.

4.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to SON X. NGUYEN whose telephone number is 571-272-

6048. The examiner can normally be reached on 8 AM -5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Ken Vanderpuye can be reached on 571-272-3078. The fax phone number

for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).
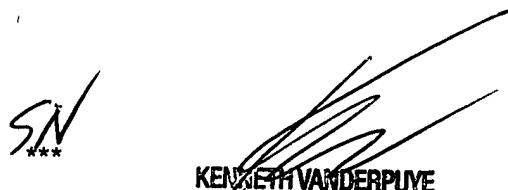
KENNETH VANDERPUYE
PRIMARY EXAMINER